

Appl. No. 10/659,187**Page - 4 - of 6****Amendment/Response****Reply to Office Action of March 24, 2005****REMARKS/DISCUSSION OF ISSUES**

Claims 1-13 are pending in this application, with claims 14-40 being cancelled as being drawn to an unelected invention. No claims are amended.

Rejections under 35 U.S.C. § 102(e)

Claims 1-13 are rejected under 35 U.S.C. § 102(e) as anticipated by Olivas et al. (US Patent 6,507,187). The rejection of the claims is respectfully traversed.

For anticipation under 35 U.S.C. 102, the reference must teach every aspect of the claimed invention either explicitly or impliedly (MPEP 706.02 IV). Applicant respectfully points out two elements in claim 1 which are not taught by the reference.

First, claim 1 claims "an electrically conducting film deposited on said substrate", whereas the reference deposits the electrically conductive film 150 (copper) on film 140 (cobalt) and not on the silicon substrate 110. In fact, even the tantalum layer 120 is not deposited on silicon substrate 110, but rather onto an oxidized silicon substrate (column 4, lines 61-62; column 5, lines 5-8; and column 7, lines 21-25). Thus the reference does not teach the above limitation of claim 1.

Note that claim 1 claims "wherein said substrate consists essentially of a substrate material which forms a bond with said film", which is likewise not taught by the reference. This limitation makes it clear that the claimed substrate consists essentially of the substrate material and not any additional oxidized substrate material. Thus, one should not read the "substrate" of the reference, which includes silicon dioxide, on the substrate of claim 1 which consists essentially of the substrate material.

To phrase this another way, the conductive film (150) in Olivas is deposited on a multilayered film substrate (Fig. 2), unlike the claimed invention in which the conductive film is deposited on the substrate, which consists essentially of the substrate material. Accordingly, the device disclosed in Olivas does not anticipate the present invention.

Second, another difference between the claimed invention and Olivas is related to the formation of a chemical bond between the substrate and metal atoms deposited on the substrate.

Appl. No. 10/659,187**Page - 5 - of 6****Amendment/Response****Reply to Office Action of March 24, 2005**

As claimed in claim 1 and elaborated in paragraphs 023 – 026 of the specification, the substrate material forms a bond with the conductive film, resulting in the conductive film growing as a continuous film and not as unconnected islands (paragraph 024 of the specification) which in turn results in remarkably low resistivity of the film. Olivas does not disclose the formation of a bond between the deposited conductive film and the substrate; indeed, formation of such a bond would be impossible in Olivas as the conductive film is deposited on a multi-layer substrate. Thus Olivas does not teach this substrate-metal film bond aspect of the claimed invention either explicitly or impliedly.

It is respectfully suggested that the rejection of Claim 1 under 35 U.S.C. § 102 (e) as being anticipated by Olivas is overcome. Claims 2-13, being dependent upon and further limiting independent claim 1 should be allowable for that reason as well as for the additional limitations they contain. Reconsideration of the rejection of claims 1-13 under 35 U.S.C. § 102 (e) is therefore respectfully requested.

Rejections under 35 U.S.C. § 103(a)

Claims 8 and 11-13 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Olivas et al. (US Patent 6,507,187). Reconsideration of the rejection of claims 8 and 11-13 is respectfully requested.

Claims 8 and 11-13 being dependent upon and further limiting independent claim 1 should be allowable for that reason as well as for the additional limitations they contain. Reconsideration of the rejection of claims 8 and 11-13 under 35 U.S.C. § 103(a) is therefore respectfully requested.

In view of the foregoing, Applicants respectfully request that the Examiner withdraw the rejections of record, allow all the pending claims, and find the application in condition for allowance. If any points remain in issue that may be resolved through a personal or telephonic interview, the Examiner is respectfully requested to contact the undersigned at the telephone number indicated or by e-mail directed to Chris@PatentingServices.com.

Appl. No. 10/659,187

Page - 6 - of 6

Amendment/Response

Reply to Office Action of March 24, 2005

Respectfully submitted,



Christopher R. Pastel, Reg. No. 37,694
Attorney for Applicant

PASTEL LAW FIRM
8 Perry Lane
Ithaca, New York 14850
Telephone: (607) 277-5907